

# *Save Energy Now LEADER Web Conference Replication Seminar Series*

## **Sell Management on Replication and Build a Network**

**Fred Schoeneborn, CEM, CEA**  
**May 24, 2011**



# Agenda

- Seminar Series **Overview**
- **Recap** Replication Session #1
- **Sell Mgmt. on Replication & Build a Network**  
Fred Schoeneborn - **ORNL** team  
Steve Fugarazzo – **Raytheon**
- **Questions/Future Seminars**



# Replication Series

- Presents **5** one-hour Webinars assisting *Save Energy Now* LEADER Companies
- Scheduled monthly - **fourth Tuesday** at 2:00 p.m.
- Focuses on **real-world** examples and solutions
- Offers practical **tools**
- Includes **peer** *Save Energy Now* LEADER participants



# Replicate Best Practices

- **Design one – build many**
- **Link** implementation and replication
- Consider as a **process** not an isolated event
- Develop a **roadmap**
- **Identify** Best Practices
- Involve **stakeholders**
- **Institutionalize** with future design teams
- Sell best practice identification using a **matrix**
- Use an **intranet** Website to share energy activities
- **Distribute** Best Practice documents frequently

# Sharing by Alcoa

- Stress that a BP is a **good idea** not an SOP
- **Identify** and develop
- **Sanction** (approve)
- **Deploy** (implement)
- **Govern** (verify)
- **Address** in BP document scope, content, & process
- **Track** Best Practice implementation
- **Recognize** plants implementing BP



# What Motivates Management?

- Actual **results** NOT marketing hype
- Impact on **Stock Value** or profit
- External excellence **recognition**
- Internal energy **awareness**
- Demonstration of **leadership**
- **Environmental** stewardship/  
good corporate citizen
- **New Ideas**
- **Competitive** advantages



# Facilitating the Selling of Management

- Lead with **benefits** NOT features
- Note the minimal **cost** to the company
- Tested at a **pilot** location
- Support claims with **experience** by others
- Use plant managers' **testimonials**
- Highlight how **morale** increases
- Provides **training**
- Emphasize “**One Company**” strategy



# Show the PRIZE for Replication

## "PRIZE"

To get senior management's attention, you should identify the "PRIZE."

- This will answer the question "**what's in it for me?**" (WIFM: management's favorite radio station)
- The following describes a method to identify the "PRIZE." Use the space in the **green** boxes to plug in the values for your company and calculate your "PRIZE."

STEPS	INPUT	EXAMPLE
1. Determine the annual energy expense (\$/year)	\$100,000,000	Assume energy expenses total \$100,000,000/year
2. Set a long-term energy expense <b>reduction goal</b> and click on the drop-down menu in the green cell (e.g., % reduction in 10 years)	25%	2.5%/year usage reduction for 10 years means usage will be 25% lower in year 10
3. Multiply the annual expense by the cumulative goal to get the \$ savings in the last year (\$/year)	\$25,000,000	$\$100,000,000 * 25\% = \$25,000,000$
4. Determine the company's annual revenue or sales \$ (\$/year)	\$5,000,000,000	Assume \$5,000,000,000
5. Determine the company's net profit (\$/year)	\$250,000,000	Assume \$250,000,000
6. Determine the company's <b>margin</b> on sales \$ by dividing the profit (step 5) by the revenue (step 4) (%)	5%	$\$250,000,000 / \$5,000,000,000 = 5\%$
7. Divide the savings (step 3) by the margin (step 6) to identify equivalent sales \$ for the same impact on the "bottom line" (\$/year)	\$500,000,000	$\$25,000,000 / 5\% = \$500,000,000$
<b>Optional</b> (equivalent unit sales)		
8. Determine <b>price per unit</b> (\$/unit)	\$0.50	Assume \$0.50 per unit
9. Divide equivalent sales \$ (step 7) by unit price (step 8) to identify <b>equivalent unit sales</b> (units)	\$ 1,000,000,000	$\$500,000,000 / \$0.50 = 1,000,000,000$ units

# Build a Network

- Base on **Site Energy Leaders**
- Use Regional or BU **coordinators**
- Remember **hourly workers**
- Add **Financial** contacts
- Include internal non-energy **supporters**
- Incorporate outside **peer** contacts
- Consider **Professional Association** representatives



# Benefits of a Network or WII-FM

- **Track** Best Practice implementation
- Provide a vehicle for **information distribution**
- Facilitate **feedback** and support
- Offer an **internal resource**
- Identify **training** requirements
- Coordinate **career development**
- Increase exposure to outside **peer groups**
- Present opportunity for other **assessments**



# Network Tools



**Recognition Opportunities**



**Network Summits**



**Benchmarking**



**Training Webinars**



**Case Studies**



**Newsletters**



**Funding**



**Certification**

# Champion of Replication

- **Steve Fugarazzo**
- Raytheon
- Manager, Facilities Engineering and Director, Raytheon Enterprise Energy Team
- Focus is on Replication





Air  
Land  
Sea  
Space  
Cyberspace

Innovation. In all domains.

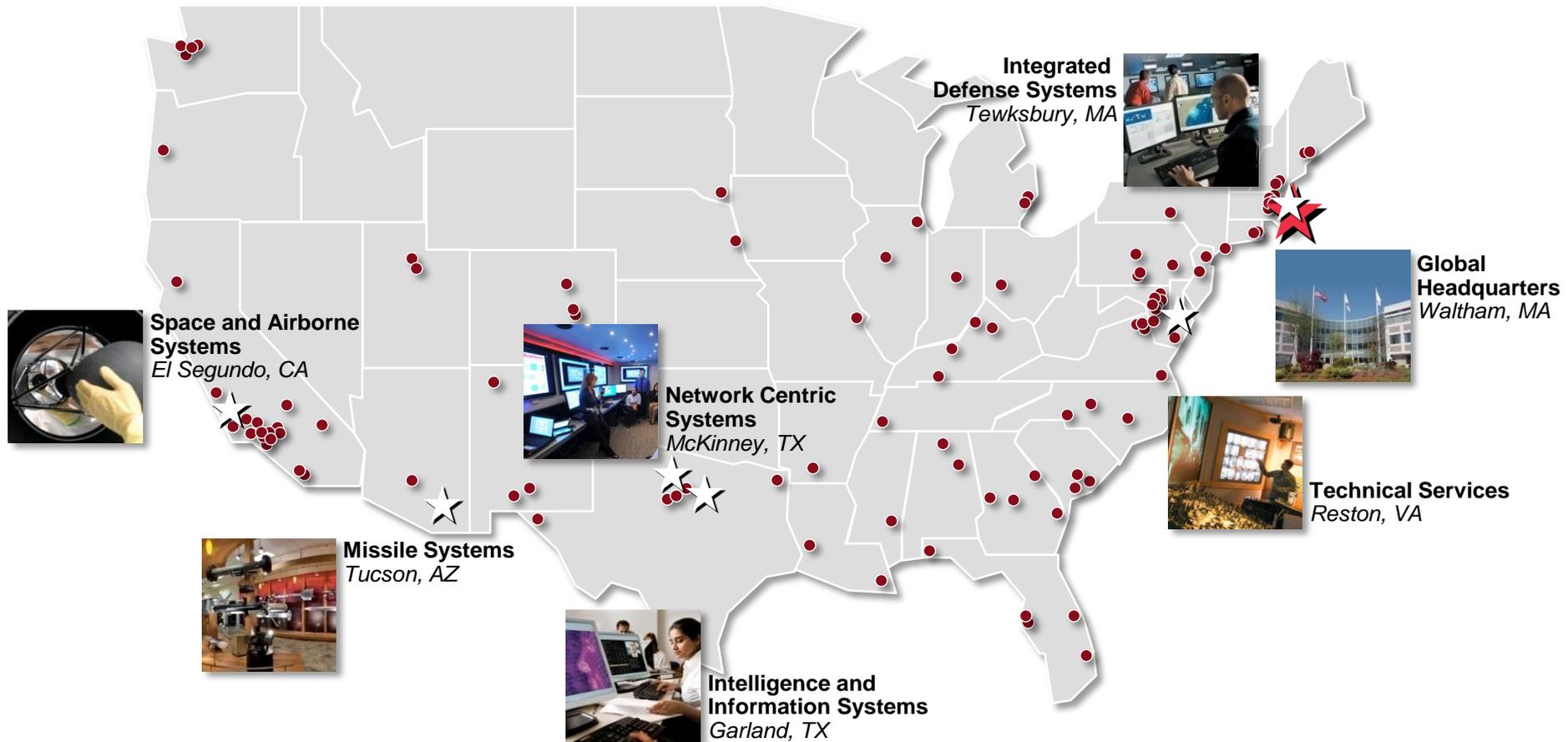
# DOE **Save Energy Now LEADER**

## **Replication Series Management & Building Networks**

Steve Fugarazzo

May 24, 2011

# Raytheon Business Headquarters

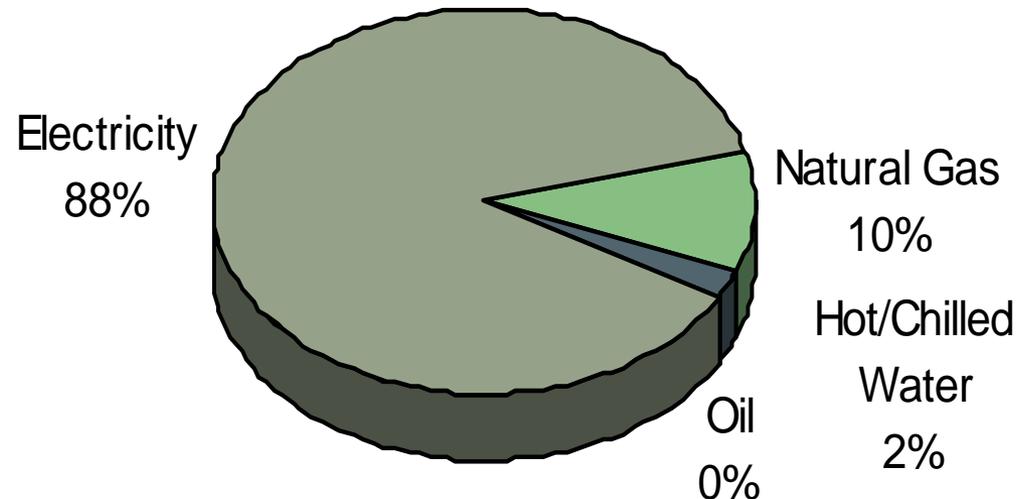


**75,000 employees worldwide, \$25 billion revenue in 2009**

# Energy Cost Breakdown

## Raytheon major sites consumed 904,000 MWH:

- Average US household uses 10 MWH per year
- Raytheon major sites consumed the equivalent of 90,000 households
- Equivalent to a city of 500,000 people
- Over \$100M Annually

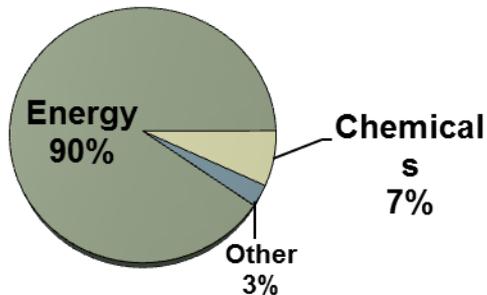


**Requires > \$1.0B Annual Sales @ 10% Profit Margin**

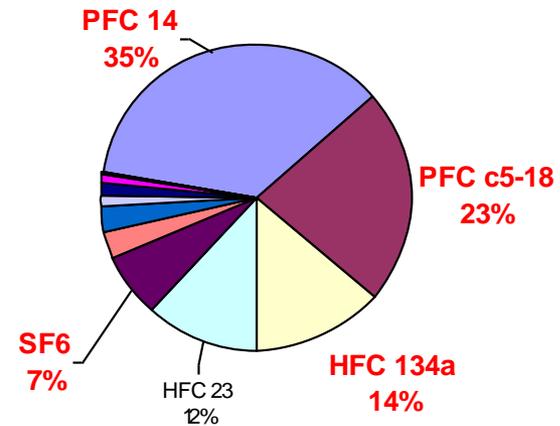
# Reduce Greenhouse Gas Emissions

Project is Sponsored By Operations Council

## Distribution of Raytheon's GHG Emissions



## 2007 GHG Emissions By Chemical



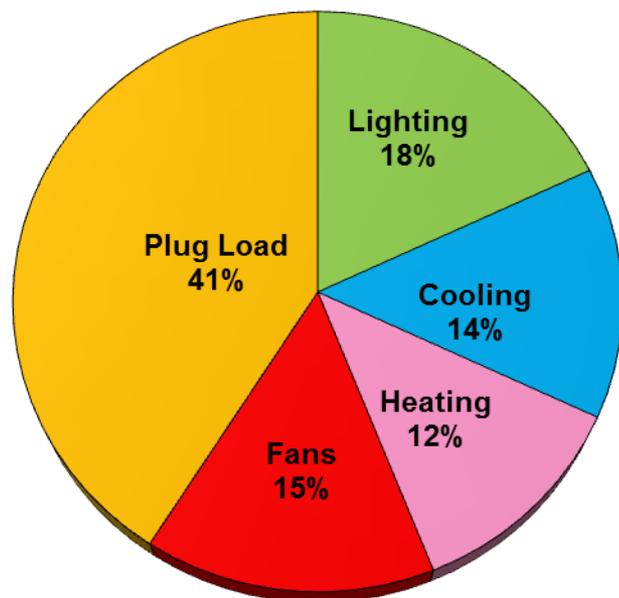
Global Warming Potential (100 yr.)	
•PFCs	7,400
•PFC 14	6,500
•HFC 134a	1,300
•SF-6	23,900

- Teams formed to target 4 chemicals
  - PFC 14
  - PFC c5-18 (Fluorinerts)
  - HFC 134a
  - Sulfur hexafluoride (SF6)
- Teams include EHS, Material & Process engineers, and certain Program managers. Corp. Engineering funding

**Emissions From Chemicals Accounted for 7%**

# Energy Use Breakdown

## Estimated Aggregate for Northeast Locations



- u Facilities continually upgrades equipment to reduce energy costs
- u Lighting, cooling, heating and fan energy influenced by occupants

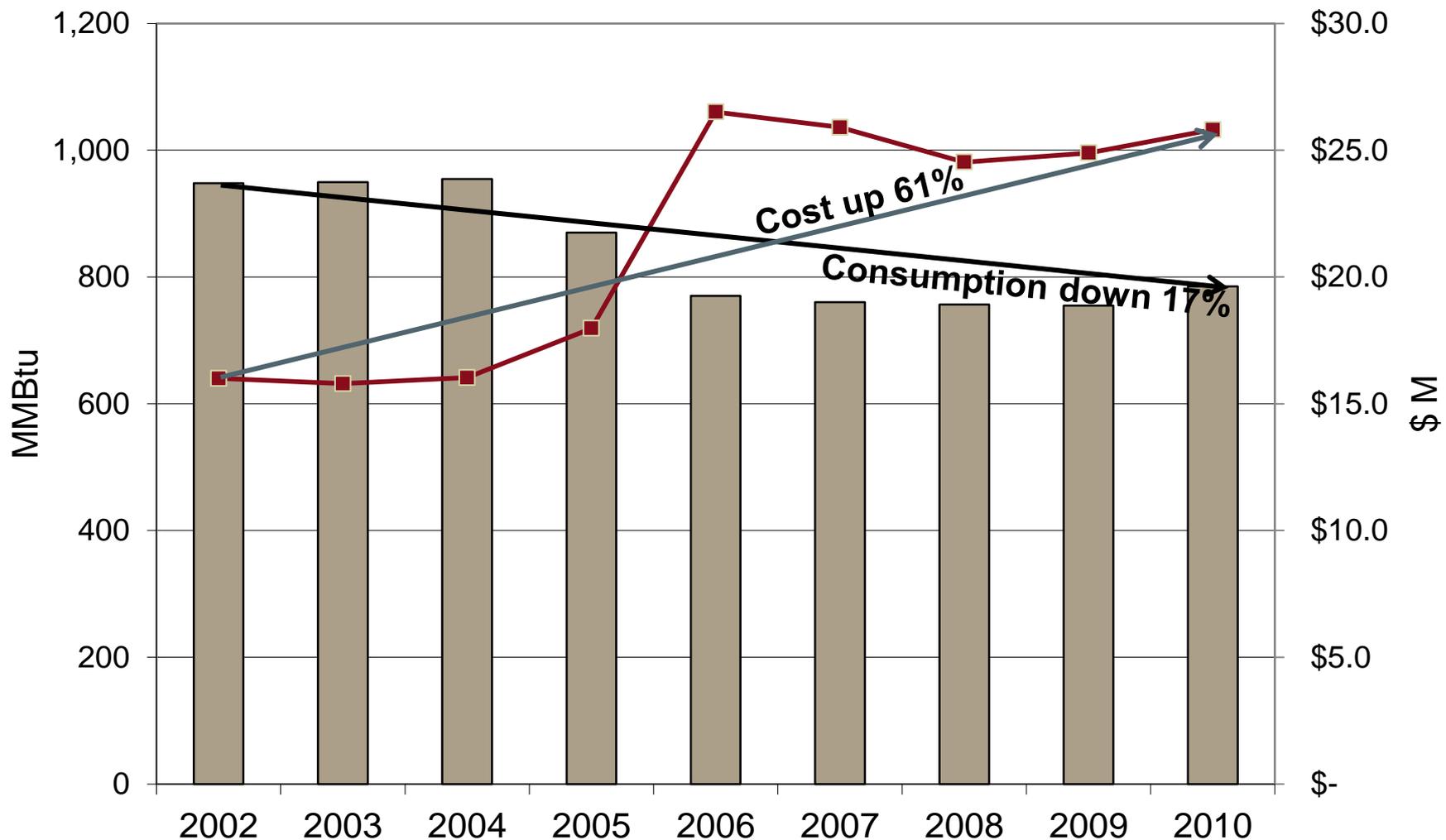
**All personnel need to help shrink Plug Load**

# Focus Areas

---

1. Energy Metrics and Budgeting
2. Energy Procurement
3. Demand Side Management
4. Energy Efficient Design
5. Energy Awareness
6. Operations and Maintenance
7. Alternative Energy Technologies

# IDS Energy Cost and Consumption History



**Over \$32.4 M cumulative savings last 8 years**

■ Total Energy Consumption (Billion BTUs)    ■ Total Energy Costs (\$M)

# ***What Distinguishes Energy Leaders?***

---

- Energy management is a priority!
  - Senior leadership support, energy policies and goals
  
- Responsibility for energy is assigned
  - An energy manager, site energy coordinators, central network
  - Employees aware of their important roles
  
- Energy management systems in place
  - Procedures and process established
  - Tracking, benchmarking, reporting
  - Mechanisms for regular assessments
  
- Capital projects and behavioral projects pursued
  
- Strong communication components in the program

# Management Systems Approach

---

## **Focused on:**

- Organizational practices
- Policy & procedures
- Planning
- Tracking & Measurements
- Documentation
- Accountability
- Continuous Improvement

# Energy Tracking and Benchmarking

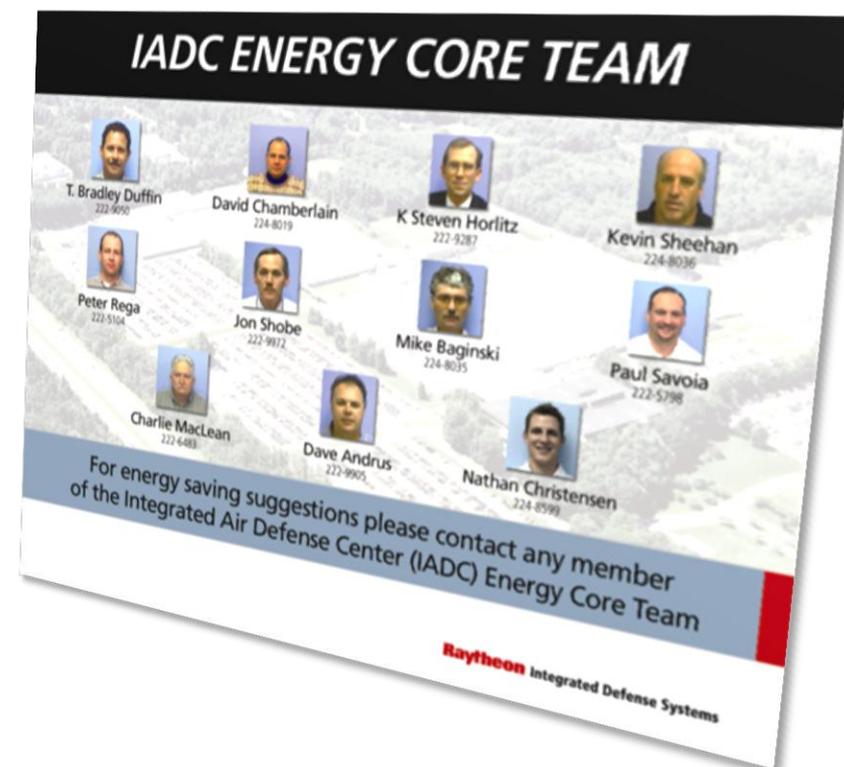
---

## Tracking & benchmarking are critical for:

- Assessing current performance
- Setting goals
- Evaluating progress
- Ensuring accountability

# Get Your People Involved

- Build internal partnerships
  - Create and nurture key partnerships to ensure your implementation is adopted and successful
  - Recommended internal partners:
    - CFO and leadership team
    - Operations team
    - Area management
    - People who are passionate and interested in cutting energy consumption



**Maintain focus on “What’s in it for them?”**

# Partnerships With Internal Stakeholders

- Information Technology – Green IT
  - Raytheon recognized with InfoWorld Green 15 award
  - Named one of Uptime Institute’s 2009 “Global Green 100”
- Environmental, Health and Safety (EHS)
  - Earth Day events, employee contests
- Human Resources
  - New employee orientations
  - Online energy training
- Manufacturing
- Engineering
- Business Development



# Altering Behaviors & Processes

- Try a softer approach
  - Subtle reminders
  - Energy audit showing results



**Energy Conservation for a Competitive Advantage**

Energy Audit Results

An Energy Audit of this area was conducted on date \_\_\_\_\_ time \_\_\_\_\_.

Results: See checked boxes.

- All equipment and lights were turned off! Thank you for contributing to the energy conservation initiative!
- Items below were found left on in your office. In the future please follow the below.
  - PC's should be powered off
  - Monitors should be powered off
  - Task light should be powered off
  - Peripherals with power switches should be powered off
    - External hard drives
    - Scanners and local printers
    - Speakers
  - Unused power cords with transformers should be unplugged
    - Laptop power cords
    - Cell phone power cords



*Help Make a Difference.  
Conserve energy wherever you can!*



UP

**DO NOT POWER DOWN - CRITICAL PRODUCTION EQUIPMENT**

**POWER DOWN ONLY WHEN EQUIPMENT IS NOT IN USE**

**PRODUCTION IN PROCESS DO NOT SHUT DOWN UNIT** \_\_\_\_\_

**DAILY: FOR INSTRUCTIONS SEE BELOW**

POWER DOWN AT END OF SHIFT:  1st  2nd  3rd

POWER UP AT: \_\_\_\_\_

**WEEKEND: FOR INSTRUCTIONS SEE BELOW**

POWER DOWN AT:  AM  PM ON:  FRI  SAT  SUN

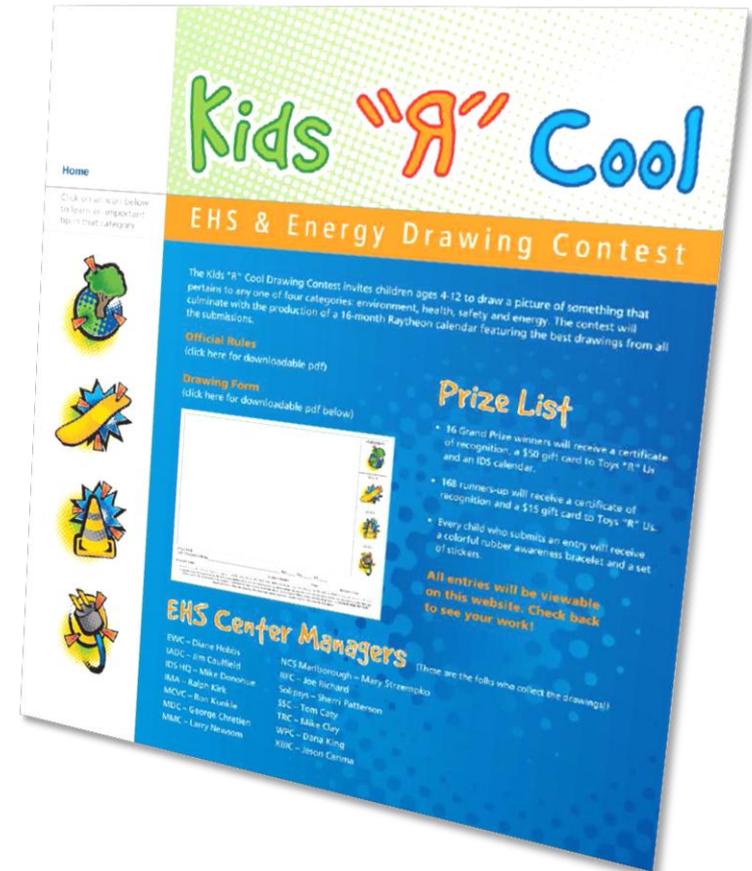
POWER UP AT: \_\_\_\_\_

**REFER TO PROCESS/ PROCEDURE NUMBER** \_\_\_\_\_

**POWER DOWN PER SPECIAL INSTRUCTIONS:** \_\_\_\_\_

# Engaging Your Teams: Energy Awareness Events and Contests

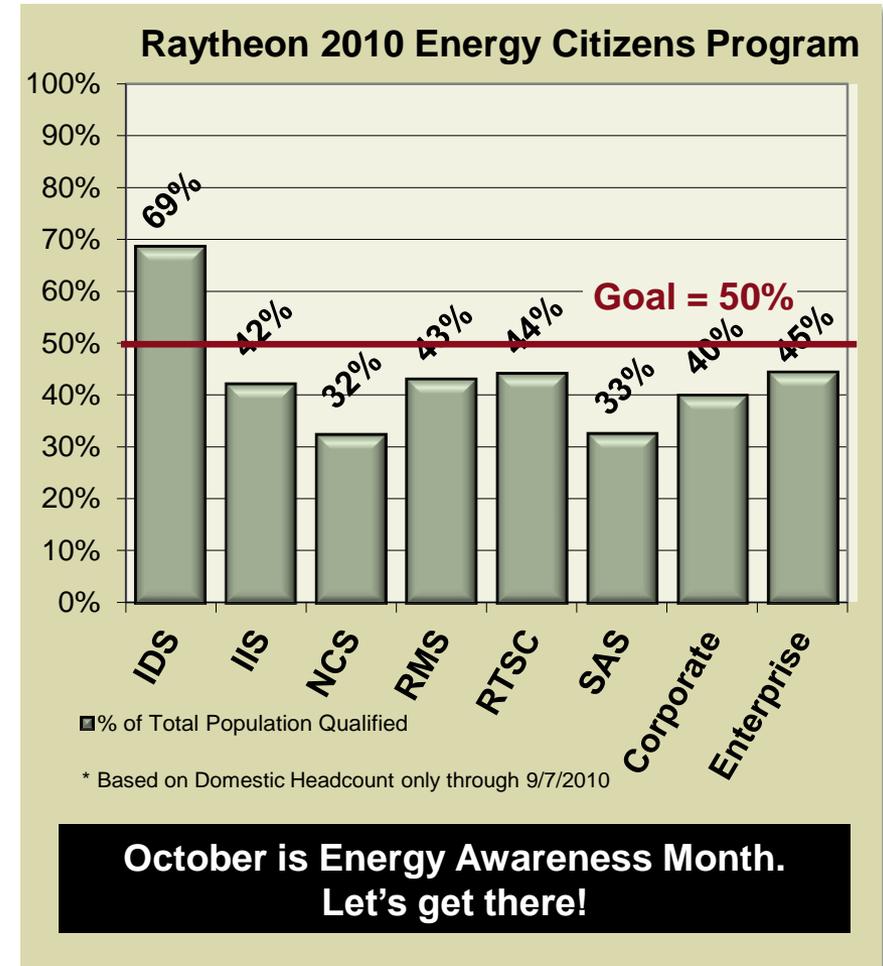
- Use celebrations to reinforce your energy program goals
  - New Year's resolution – current year goals
  - Earth Day in April
  - Ice cream socials
  - Energy awareness month
- Create contests
  - Involve family
  - Guess the amount of the next energy bill
  - “Wheel of Fortune”-themed contest



Continuously create positive buzz

# Deliver Metrics/Reports

- Keep it simple
  - Internal to the team: Energy units
  - Every building, all sites, each business unit
  - Every month
  - External to the leadership team – energy costs and percentage reduction
- Reports to the leadership team
  - Be concise, focus on costs
  - Roll up each site, each business unit
  - Explain all anomalies
  - Estimate projected energy use



**Report progress against goals**



# Questions

**Contact: Steve Fugarazzo**  
**[Steven\\_J\\_Fugarazzo@Raytheon.com](mailto:Steven_J_Fugarazzo@Raytheon.com)**

# Next Seminar in the Series

- **June 28, 2011**
- **2:00 p.m. Eastern**
- **“Just do it (replicate)” with Plans, Tools, and Resources**
- **Guest Speaker from ArcelorMittal**
- **Please register**



# Feedback

- **Welcome** comments regarding Seminar Series
- Seminars are **your** sessions
- Make seminars **meaningful** for you
- Feedback aids **continuous improvement**
- Send **comments to** Lindsay Bixby at:  
[lbixby@bcs-hq.com](mailto:lbixby@bcs-hq.com)

